MONTHLY LETTER OF THE BUREAU OF ENTOMOLOGY
UNITED STATES DEPARTMENT OF AGRICULTURE

Number 158 June, 1927

FOREST INSECT INVESTIGATIONS

F. C. Craighead, Senior Entomologist, in Charge

Dr. T. E. Snyder spent June 8 and 9 at Henderson, Ky., consulting with house owners on methods of eradicating subterranean terminates which were damaging the woodwork of buildings. In several instances at Henderson these termites had penetrated and damaged the buildings, owing to the fact that inferior grades of mortar had been used in the brick foundations.

On June 13 C. W. Knowles, Director of Agriculture, Accra, Gold Coast, British West Africa, and A. J. Findlay, Ibadan, Nigeria, British West Africa, consulted with Dr. Snyder in regard to methods of termite control in their respective districts, in which termites are one of the major pests.

BEE CULTURE INVESTIGATIONS

James I. Hambleton, Apiculturist, in Charge

The facilities for research work at the Bee Culture Laboratory have been considerably augmented by the recent addition of an entire new bee-disease laboratory on the third floor of the present building, where diseases pertaining to both brood and adult bees will be studied.

Although U. S. standard grades for honey have just been announced, this Division has already received reports that use is being made of them by certain large commercial shippers of honey.

Prof. Lloyd M. Bertholf has just been given a temporary appointment, to return to the Laboratory to continue his experiments on the response of the honeybee to lights of various intensities and wave lengths.

Miss Mary Louise Crossman has been appointed Temporary Field Assistant, to assist in bee-disease research and in the diagnoses of samples of bee diseases, which are sent to the Laboratory from all parts of the country.

A cabin has been leased in an isolated locality about 16 miles from Laramie, Wyo., to serve as temporary headquarters for some work on flight activity and bee diseases. W. C. Northrup and C. Harry Linsley have recently received temporary appointments as Field Assistants, to assist in this work at the Intermountain Bee Culture Field Station.

JAPANESE BEETLE INVESTIGATIONS

Loren B. Smith, Entomologist, in Charge

The adult Japanese beetles have made their appearance at Riverton, N. J., but there will probably be no large infestations until after the first week in July. The first beetle of this season was recorded from Glassboro, N. J., on June 17. With the appearance of the beetle and the imposition of quarantine measures the laboratory force has been materially increased.

Several college men are temporarily connected with the Beetle Insecticide Section of the Japanese Beetle Laboratory and are working under the direction of E. R. Van Leeuwen, Associate Entomologist. Included in this number are Prof. O. G. Anderson, Purdue University; Howard Stackhouse, University of Arizona; Rankin Watson, Temple University; C. E. Jennings, Connecticut Agricultural College; H. H. DeCou, Rutgers University; M. M. Ott, Gettysburg College and University of Pittsburgh; G. A. Fails, Grove City College and University of Chicago; P. R. Dennis and I. L. Hunt, Jr., University of Pennsylvania; and R. L. Tripp, Pennsylvania State College.

K. B. Rogers and H. W. Coward, of the University of Pennsylvania, have joined the Soil Insecticide Section of the Japanese Beetle Laboratory. Mr. Rogers has been doing graduate work at the University of Pennsylvania.

Dr. W. E. Fleming, of the Soil Insecticide Section, recently visited Washington, where he conferred with members of the Bureau of Entomology and the Bureau of Chemistry on some of the problems of that section.

The following temporary appointments have been made in the Ecology Section: H. S. Margerum, New Rochelle, N. Y.; Nathaniel Tischler, Yale University; Daniel Ludwig, and F. L. Else, University of Pennsylvania; R. N. Johnson, J. S. Holder, W. H. Minor, Jr., and W. B. Redmond, Emory University; H.F. Strohecker, Macon, Ga.

On June 28 J. L. King started the parasite introduction for the control of Anomala orientalis at Westbury, Long Island. A number of female Tiphia vernalis were introduced at this time. H. C. Hallock, formerly of the Japanese Beetle Laboratory, will have charge of the rearing work on Long Island.

The Laboratory at Riverton received on June 12 a large shipment of Tiphia vernalis from Korea. The parasites were shipped as adults in specially prepared tins bearing supplies of water and food. The success of this shipment was very remarkable, as 80 per cent of it came through in good condition after being 20 days en route. The wasps were used in part for immediate colonization and in part for propagation, the latter resulting in the production of about 15,000 eggs. The parasitized beetle larvae bearing these eggs were transferred from the laboratory to the field, where, under normal conditions, they are able to develop into adult wasps.

Centeter cinerea, a tachinid parasite of the adult Popillia, is proving to be more abundant this year than last. Since its introduction in 1923 this species has constantly increased and, in 1926, records indicated that an area of approximately 62 square miles was covered. It is hoped that at the close of the present season this area will have been materially increased.

E. H. Siegler, of Silver Spring, Md., recently conferred with E. R. Van Leeuwen concerning codling moth investigations.

Curtis H. McDonnell, of Wesleyan University, will join the Physiological Section of this laboratory on July 1.

Among the foreign entomologists visiting this laboratory in June were Dr. Stanislaw Minkiewicz, Pulaway, Poland; Mr. Stanley Garthside, Australia; Prof. Dr. Karl Ludwigs, Berlin, Germany; Dr. N. Yagi, Kyoto, Japan; and Dr. T. Inukai, Sapporo, Japan. Dr. Ludwigs was accompanied by S. B. Detwiler, in charge of the Blister Rust Control, Bureau of Plant Industry.

A. E. Stene, State Entomologist of Rhode Island, and Harry Horovitz, Superintendent of Field Work in the Rhode Island State Department of Agriculture, recently conferred with members of the laboratory force relative to present research methods and results.

A Japanese beetle quarantine office was recently established at 682 Main Street, Stamford, Conn., to supervise the quarantine activities in Connecticut. This office is in charge of J. P. Johnson, who has been engaged in control work on Anomala orientalis for the State of Connecticut. Temporary quarantine offices have also been opened at Hamburg and Allentown, Pa., in the territory added to the regulated area with the last revision of the quarantine.

The first fatality within the organization of the Japanese Beetle Laboratory occurred on June 22 at Easton, Pa. L. D. Freas, a quarantine inspector stationed at Norristown, Pa., was killed, and V. G. Carlin and D. D. Hetrick, also of the Norristown office, were slightly injured. Hetrick was driving a large G. M. C. truck and was approaching an obscure railway crossing when an approaching engine forced him to leave the road in order to avoid a collision. All three men jumped, but Freas was caught between the side of the truck and a tree, and crushed so seriously that he died at the hospital a few hours after the crash.

TROPICAL AND SUBTROPICAL PLANT INSECT INVESTIGATIONS

A. C. Baker, Senior Entomologist, in Charge

The Mexican fruit worm having been found at Brownsville, Tex., Dr. A. C. Baker made a trip there during the last week in June for the purpose of investigating the insect in that general region. He also investigated the insect in several of the States in Mexico. Dr. Baker was joined in this work by Mr. James Zetek, in charge of the Bureau's laboratory at Ancon, Canal Zone.

STORED-PRODUCT INSECT INVESTIGATIONS

E. A. Back, Senior Entomologist, in Charge

On June 6 W. D. Reed and Perez Simmons attended a meeting of the Coordinating Committee of the California Dried Fruit Association at Berkeley, Calif. Prof. E. O. Essig is Chairman of this Committee and J. C. Hamlin is the Bureau's representative.

R. T. Cotton spent June 14 in Chicago making examinations of furniture infested by insects. Later, in Washington, a more detailed examination was made of furniture expressed to the Bureau at the expense of the manufacturers.

J. C. Hamlin, Fresno, Calif., spent about three weeks in June in Washington for conference and library work. After a short vacation in Columbus, Ohio, he will return to Fresno.

The week of May 23 ushered in "Bean Weevil Control Week" in Stanislaus County, Calif. This was a follow-up campaign. All agricultural organizations and officials seemed to be behind this movement. Circulars were printed at the expense of the Chambers of Commerce, etc., and widely distributed. Mr. Silvester, Assistant County Farm Advisor, wrote Mr. Larson, of the Bean Weevil Investigations, "Ten thousand of the circulars have been distributed over the county. We are receiving excellent cooperation from all the folk interested in the matter. The Turlock Irrigation District is mailing the circulars out with their regular bills; the Milk Producers' Association is mailing them out with their checks. The Ceres paper is placing one in each copy of this week's issue, and so it goes. Bean dealers are particularly cooperative. We have also had printed 225 posters giving much the same material as the circular does. These have been placed around town and the merchants were asked to talk bean weevils to their rural customers. A story on the subject is being given to the County papers for every issue published this week."

The "Blue Ribbon Information," a printed bulletin dealing with dried fruit interests, contains in its May, 1927, issue three articles, "New Standards Set for Shipments of California Figs," "Drastic Changes in Fruit Handling are Recommended," and "Rules Governing Care and Curing Fruit Given Out." These three articles are all the outgrowth of insect infestations and pure food law regulations.

A. O. Larson and C. K. Fisher had an article, "Storage Weevils Infest Bean Fields," in the May 28 issue of the Pacific Rural Press.

At the request of the Smith Storage and Transfer Company, Washington, D. C., Dr. Back supervised the fumigation of their U Street establishment over the Memorial Day week end.

The present temporary address of Perez Simmons is Hotel Fresno, Fresno, Calif.

C. K. Fisher attended the Reno meetings, June 22 to 24, of the Pacific Slope Branch of the American Association of Economic Entomologists.

D. K. Grady wrote in June commending the work of W. D. Reed and Perez Simmons in connection with the present campaign to reduce insect infestation among fruits, particularly figs. The California Dried Fruit Association staged a "Clean-up Week," beginning June 20, and in preparation of an official bulletin to the Association membership Messrs. Simmons and Reed rendered considerable assistance. These gentlemen attended meetings of packers and growers at San Jose on June 15, and at Fresno on June 16.

George W. Ellington has sent Alvah Peterson, at Riverton, N. J., wheat infested with the Angoumois grain moth, with information regarding a satisfactory method for securing in quantity the eggs of this pest of stored products. Mr. Peterson will endeavor to use the eggs of the Angoumois grain moth as a constant host supply for Trichogramma minutum, an important parasite of the Oriental peach moth.

CEREAL AND FORAGE INSECT INVESTIGATIONS

W. H. Larrimer, Senior Entomologist, in Charge

W. E. Haley, of the New Orleans, La., laboratory, attended a conference of the entomologists of Louisiana, Arkansas, and Mississippi, held at Vicksburg on June 1 to consider possible damage from cutworms following the river floods.

Early in June J. W. Ingram, also of the New Orleans laboratory, inspected rice fields in Missouri and Illinois for insect damage and also visited a former rice-growing district of South Carolina. Passing through Washington, he called at various offices of the Bureau.

W. R. Walton spent June 13 to 20 with D. J. Caffrey, inspecting the research work and results of the clean-up work in the Lake Erie region.

In the first week of June C. M. Packard, in charge of the West Lafayette, Ind., laboratory, visited the Carlisle, Pa., and the Washington offices, for consultation with respect to Hessian fly work. He later made a trip into the States of Tennessee and Alabama, also in connection with this work.

C. N. Ainslie, in charge of the Sioux City, Iowa, laboratory, recently made a trip into western North Dakota and eastern Montana in connection with his field activities.

On June 17 T. E. Holloway, in charge of the New Orleans laboratory, attended a meeting of sugar planters and others, held at Baton Rouge to consider airplane dusting of sugar cane with sodium fluosilicate.

H. D. Smith, of the Carlisle, Pa., laboratory, spent the greater portion of June in Georgia and other southern States, making a survey of the distribution of the Hessian fly.

TAXONOMIC INVESTIGATIONS

S. A. Rohwer, Senior Entomologist, in Charge

Dr. E. A. Chapin went to Springfield, Mass., on June 8, to arrange to bring to Washington the insect collection of Dr. George Dimmock. Dr. Dimmock is giving the National Museum his collection of adults, larvae, slides and notes, consisting of fifteen large double boxes of pinned material (amounting to about 35 Schmitt boxes); about 3,500 small glass tubes of material preserved dry, consisting of the shed skins of larvae of all stages, pupae, some adults, and all of the parasites which emerged in the course of Dr. Dimmock's rearings; a small amount of alcoholic material; about 2,650 numbered notes, which are in some cases mere skeleton records of capture on a certain food plant, but in many cases are extremely detailed, covering three or four pages. Dr. Dimmock has spent about 50 years studying the life histories and habits of insects of the New England States, and has gathered together a great amount of valuable material. This collection will be deposited in the National Museum, where it will be available to all of the Bureau specialists. It will be distributed and incorporated under the direction of Dr. Chapin.

R. A. Cushman spent June 20 to 24 in Philadelphia, studying types of Ichneumonidae at the Academy of Natural Sciences.

W. L. McAtee has returned from his trip to Europe, where he examined types in the collections at Paris, Budapest, Vienna, Berlin, Copenhagen, Stockholm, Upsala, Warsaw, and London. While visiting these places he arranged a number of exchanges, and also arranged to borrow a great many specimens to aid him in his study on leafhoppers.

Dr. A. Dampf, Chief Entomologist of the Mexican Government, was in Washington the last week of June for conference with the Federal Horticultural Board about the orange maggot, a menace to southern citrus fruit. He took the opportunity to confer with the specialists in the Museum, and spent one night collecting at light in the Zoological Park.

T. Ulke recently called on Dr. Dyar at the Museum, prior to leaving on a collecting trip in the Rocky Mountains National Park of Canada. He expects to send Dr. Dyar some mosquito material.

Stanley Garthside, of Australia, who has been studying forest entomology at Cornell University, recently visited the Division of Insects and met the various specialists there.

Harold Compere, of Riverside, Calif., recently donated a small collection of chalcid types, described by himself, to the National Collection. Mr. Compere has previously sent us several similar collections.

Paratypes of four species of chalcids have been received from P. H. Timberlake, of Riverside, Calif., for deposit in the National Collection.

A. B. Gahan recently received from A. P. Dodd, of the Commonwealth Prickly Pear Board, Brisbane, Australia, representatives of fourteen species of Australian Scelionidae, this being the second lot of such material which Mr. Dodd has sent in exchange for similar material from America. Several paratypes are included, and the whole makes a valuable addition to the collection.

TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, Senior Entomologist, in Charge

N. F. Howard, of the Mexican bean beetle laboratory at Columbus, Ohio, visited Washington on June 10, and the Bureau laboratories at Riverton, N. J., and Philadelphia, Pa., on June 13. Leaving Columbus on June 21, he visited the substation at Birmingham, Ala., and again on June 29 he went to confer with Rodney Cecil at the branch station at Geneva, N. Y.

C. H. Popenoe left Washington June 20 on a trip to points in southwestern Michigan, to confer with various workers regarding the transmission of berry mosaics by insects, and returned June 28. On the way out Mr. Popenoe stopped at East Lansing, Mich., and conferred with Prof. C. W. Bennett, of the Agricultural College, as to technical methods in the demonstration of mosaic symptoms in plants and in pathological treatment. In southwestern Michigan a large number of fields were visited and studied. These contained the streak or blue-stem disease, leaf-curl, and the yellow, mild, and red raspberry mosaics. Other berries were also studied in which chlorotic symptoms as yet unknown to belong to the mosaic group were manifest.

Walter Carter, of Twin Falls, Idaho, and R. E. Campbell, of Alhambra, Calif., attended the meetings of the Pacific Slope Branch of the American Association of Economic Entomologists held at Reno, Nev., June 22 to 25. From Reno Mr. Carter went to Berkeley and other points in California to confer with State officials regarding investigations on the sugar-beet leafhopper.

A new substation for investigations of the sugar-beet leafhopper was opened at Corvallis, Oreg., June 10. C. H. Griffith has been transferred there from the Twin Falls, Idaho, laboratory.

Joe Milam, a former employee of the tobacco insects laboratory at Clarksville, Tenn., was reinstated June 6, and will assist A. C. Morgan at Clarksville.

K. E. Gibson has been given a probationary appointment as Junior Entomologist, effective June 15, and will be located at the Walla Walla, Wash., wireworm substation of the Toppenish, Wash., laboratory.

J. U. Gilmore and S. F. Grubbs, of the Clarksville, Tenn., tobacco insects laboratory, are now conducting work on the tobacco crambus at Appomattox, Va.

S. E. Crumb and K. B. McKinney, also of the Clarksville, Tenn., tobacco insects laboratory, are conducting work on tobacco wireworms at Lexington, Ky.

Temporary appointments as Field Assistants have recently been given to the following men:

E. C. Herber and I. R. Taylor to assist D. E. Fink, of the Philadelphia, Pa., laboratory; D. M. DeLong, O. E. Gahm, and H. L. Weatherby, to assist N. F. Howard, of the Columbus, Ohio, laboratory; S. F. Grubbs, S. C. Lyon, and W. T. Darrow to assist A. C. Morgan, of the Clarksville, Tenn., laboratory; J. E. Durham to assist J. R. Douglas, of the Estancia, N. M., laboratory; L. P. Clarke to assist E. W. Davis, of the Richfield, Utah, substation; V. E. Romney to assist Walter Carter, of the Twin Falls, Idaho, laboratory, and T. P. Dawkins to assist M. M. High, of the Gulfport, Miss., laboratory.

DECIDUOUS-FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Associate Chief of Bureau, in Charge

Dr. F. L. Campbell, a graduate of Harvard University and the University of Pennsylvania, has been appointed Associate Entomologist and assigned to duty at Washington, where he will undertake research work on the effect of arsenicals and arsenical substitutes on insects, involving studies of the toxic effect of groups of inorganic and organic compounds on the insects under investigation.

R. S. Filmer, a graduate of the Connecticut Agricultural College, has been appointed Junior Entomologist and assigned to duty at Washington, where he will be associated with Doctor Campbell.

Fred E. Brooks visited Washington in the latter part of June, in connection with some investigational work on nut insects at Bell station, Md. He has now returned to his permanent headquarters, French Creek, W. Va.

LIBRARY

Mabel Colcord, Librarian

NEW BOOKS

Alexander, W. B.
Natural enemies of prickly pear and their introduction into Australia. 80 p., illus. Government printer, Melbourne, 1925. (Australia Inst. Science & Industry Bul. 29.)

Armbruster, Ludwig.
Der Bienenstand als völkerkundliches Denkmal. 147 p., illus. Karl Wachholtz, Neumünster in Holstein, 1926. (Bücherei für Bienenkunde bd. 8.) Literatur, p. 145-147.

Beauregard, Henri.
Les insectes vesicants... 544 p. 19 pl. Felix Alcan, Paris, 1890. Bibliographie, p. 461-464.

Comstock, J. A.
Butterflies of California, a popular guide to a knowledge of the butterflies of California, embracing all the 477 species and varieties at present recorded from the State. 334 p., 63 col. pl. Dr. John Adams Comstock, 501 Edwards-Wildey Bldg., 6th and G Streets, Los Angeles, Cal. $12.00.

Conklin, E. G.
A synopsis of the general morphology of animals. 85 p., illus., fold. tab. Princeton University Press, Princeton, N. J., 1927.

Davis, K. C.
Horticulture: a text-book for high schools and normals, including plant propagation; plant breeding; gardening; orcharding; small fruit growing; forestry; beautifying home grounds; the soils and enemies involved... Ed. 4. 416 p., illus. J. B. Lippincott Company, Philadelphia and London, 1927. (Lippincott's farm life text series.)

Fielding, J. W.
Australasian ticks. 140 p., illus. H. J. Green, government printer, Melbourne, 1926. (Australia Dept. of Health. Service Pub. (Tropical Division) 9.) References, p. 98-111.

Friese, Heinrich.
Die Bienen, Wespen, Grab-und Goldwespen. 192 p., illus., col. pl. Franchkh'schen Verlagsbuchhandlung, Stuttgart, 1926. (Die Insekten Mitteleuropas insbesondere Deutschlands, hrsg. Chr. Schröder Bd. 1, Hymenopteren (Erster Teil)). Literaturverzeichnis, p. 191-192.

Frogatt, J. L.
Dusting with calcium cyanide for banana thrips control. Queensland Agr. Jour. v. 27, pt. 1, p. 67-89, illus., Jan.,1927.

Great Britain. Minister of Agriculture and Fisheries.
Report on the occurrence of insect pests on crops in England and Wales for the years 1922, 1923, and 1924. 35 p. His Majesty's stationery office, London, 1925. (Gt. Brit. Min. Agr. & Fisheries. Miscellaneous Pub. No. 49.)

Hatch, M. H.
The morphology of Gyrinidae. Mich. Acad. Sci., Arts & Letters. Papers, v. 7, p. 311-350, pl. XX-XXIV, 1926. Bibliography, p. 345-346.

Henderson, Junius.
The practical value of birds. 342 p. The Macmillan Company, New York, 1927. Bibliography, p. 291-318.

Hering, Martin.
Die Minenfauna der Canarischen Inseln. Zool. Jahrbücher, Abt. für Syst. Bd. 53, Hft. 4/5, p. 405-486, 1927.

Kickhoffel, K. B.
Die deutsche Bienenzucht. 93 p. Karl Wachholtz, Neumünster, 1927.

Lundbeck, William.
Diptera Danica. pt. 7, Platypezidae, Tachinidae. 560 p. G. E. C. Gad, Copenhagen; William Wesley and Son, London, 1927.

Melichar, L.
Monographie der Cicadellinen. III. Ann. Musei Nationalis Hungarici v. 23, p. 273-394, 1926. (Pt. I is v. 21, p. 195-243, 1924; Pt. II is v. 22, p. 329-410, 1925.)

Millot, Jacques.
Contribution à l'histophysiologie des araneides. 238 p., illus., plates. Laboratoire d'Evolution des êtres organises, 195 Boulevard Raspail, Paris; Dulau & Co., 34-36 Margaret St., Cavendish Sq., London, 1926. (Supplements au Bul. Biol. de la France et de la Belgique. Supplement VIII.)

Pepoon, H. S.
An annotated flora of the Chicago area with maps and many illustrations of topographic and plant features. 554 p. Chicago Acad. Sci., Chicago, 1927. (Chicago Acad. Sci. Bul. VIII. Nat. Hist. Survey.)

Rosenau, M. J.
Preventive medicine and hygiene. Ed. 5. 1458 p., illus. D. Appleton and Company, New York and London, 1927. Bibliographic footnotes.

Sandon, H.
The composition and distribution of the protozoan fauna of the soil. 237 p., 6 pl. Oliver & Boyd, Edinburgh & London, 1927. Bibliography, p. 213-219.

Schenkling, S.
Elateridae II. p. 265-636. W. Junk, Berlin, 1927. (Schenkling, S. Coleopterorum Catalogus pt. 88.) Completes the volume.

Smith, E. F.
Old chemistries. 89 p., front, ports. McGraw-Hill Book Company, New York, 1927.

U. S. Dept. Agriculture.
Miscellaneous circular 98. The forest, a handbook for teachers. By D. Priscilla Edgerton. 71 p., illus. Government Printing Office, Washington, D. C., 1927.